

Translation of descriptions about references cited in the Japanese Official Action dated  
January 18, 2005

In claim 1, it is described that a computer is used, but specific means in which software and hardware cooperate with each other is not described. Therefore, description of claim 1 is not regarded as "the invention" defined in Article 2 of Patent Law.

Also, claim 4 includes only the description, "a function which automatically retrieves the design-related requirement information relating to the design specifications from the database, and presents a content of the retrieved information". Therefore, it is not considered that information processing using software is specifically achieved using a hardware resource.

The same applies to claims 2, 3, 5, 6.

The cited reference 1 (JP 09-179892) discloses that when an attribute value of a required specification is input, standard part data in which a range of the attribute and a restriction on three-dimensional CAD data are associated with each other and are registered is retrieved, and a result of retrieval is presented (FIG. 3).

The cited reference 2 (JP 11-120001) discloses that when data on a required function is input, a past case which satisfies the required function is obtained from design case data base using analogy; the case is evaluated; and when a problem is found as a result of evaluation, a solution to the problem is extracted and is realized, and a result of reevaluation is presented (FIG. 10).

The description of claim 1, "a step of preparing design specifications" and "a step of creating detailed design information" are processes performed by a person, and are not related to a matter for specifying the invention.

Translation of descriptions about references cited in the Japanese Official Action dated  
June 28, 2005

The cited reference 1 (JP 10-275168) discloses that design know-how data includes a record indicating a failure phenomenon, and particularly, a record relating to a solution (a solution department and a solution detail) can be added (particularly, [0066] to [0071], FIG. 12 to FIG. 15).

“The design know-how data”, “the failure phenomenon”, and “the solution” in the cited reference 1 are equivalent to “the design-related requirement information”, “the problem” and “the solution” in claim 1, respectively.

Also, “the design know-how data” in the cited reference 1 is equivalent to “the design-related requirement information” in claim 2.

Translation of descriptions in paragraphs in JP 10-276168, which the Japanese  
Examiner indicated in the Official Action

[0066]

As a record constituting design know-how data, as shown in FIG. 12(2), a record 1214 relating to a solution (that is, a record in which “a solution” is maintained in a characteristic category storage region 1202, a solution department is maintained in data 1 storage region 1205, and a solution detail is maintained in a data 2 storage region 1206) may be added.

[0067]

In the aforementioned design know-how, “if a part type A<sub>1</sub> is mounted at a position L<sub>1</sub> at the time of design, defects F<sub>1</sub>, F<sub>3</sub> may occur. Therefore, the part type A<sub>1</sub> is mounted at a position other than the position L<sub>1</sub>”, the solution detail is equivalent to the phrase “the part type A<sub>1</sub> is mounted at a position other than the position L<sub>1</sub>”. In order to assist a young designer who cannot understand the solution detail by using only “a defect occurrence tendency for each substrate/part”, it is preferable to add such a solution detail.

[0068]

FIG. 13 shows an example of a method of adding the solution record to the design know-how data. When an instruction is given to add the solution record, first, a design know-how obtaining portion 11 reads a design know-how database 1200 created in step 104 from a magnetic disk device 201(step 1301), reserves a storage region 1214 for the

solution record to be added, and stores “the solution” in the characteristic category storage region 1202 of the region 1214.

[0069]

Next, referring to a FB department database, the design know-how obtaining portion 11 detects a department relating to a part/substrate characteristic or a defect phenomenon of the design know-how data to which the solution record is to be added, that is, a department to which the design know-how is to be given through feedback (hereinafter, referred to as “FB department”), and stores the detected FB department in the data 1 storage region 1205 of the reserved region 1214 (step 1302).

[0070]

As shown in FIG. 14, the FB department database 1300 is configured such that a solution department storage region 1401 is associated with the characteristic category storage region 1402 and the characteristic name storage region 1403, like the design know-how database. In the solution department storage region 1401, the value 0 or the value 1 is stored for each department. In this embodiment, “0” signifies that a characteristic is not associated with a department”, and “1” signifies that a characteristic is associated with a department”. Accordingly, a record on the first line in the example shown in FIG. 14 shows that “a material of the substrate characteristic is associated with a design 2G”. That is, the design 2G makes some kind of decision about the material. Retrieval of the database 1300 may be omitted and input of the department using a keyboard may be received in next step 1303. In this case, it is not necessary to prepare the FB department database 1300 in advance.

[0071]

Next, the design know-how obtaining portion 11 presents the defect occurrence tendency data registered in the design know-how data to which the solution record is to be added, and the FB department detected in step 1302 on a display 206, receives the input of the solution detail, and stores the obtained solution detail in the data 2 storage region 1206 of the region 1214 reserved in step 1301 (step 1303). As shown in FIG. 15 (1), an input screen displayed in step 1303 includes a region in which the defect occurrence tendency 1501 and the FB department 1502 are presented, and a region 1503 in which the input of the solution detail is received. The input to the solution detail input region 1503 is received through the keyboard 204. An input screen shown in FIG. 15 (2) may be displayed.